PROJECT NUMBER: 0400
PROJECT TITLE: Low Density Rod Development
PROJECT LEADER: R. S. Mullins
PERIOD COVERED: July, 1988

LOW DENSITY ROD

A. **Objective**: Develop a continuous process for the production of reduced density cigarettes.

B. **Results**: To identify any problems associated with extended production runs which do not manifest themselves in typical short sample production runs, a "pseudo" production run was made on the low density cigarette maker. The maker was down for 1 hour and 29 minutes of the 5 hour and 21 minute run, giving an efficiency of 72%. The average time between stops was 7 minutes and ranged from a high of 33 minutes to a low of 10 seconds. The majority of the stops were caused by either clogging of the sideseam glue nozzle or jams at the tipper rolling block. No problems were encountered which could be attributed to binder buildup.

Sample cigarettes were produced from fillers incorporating two potential burn control additives, DAP and calcium acetate. Testing of these samples is in progress. The filler containing 4% DAP, applied before the binder, tended to produce jams under the shoe similar to those experienced previously with filler having OV's near 18%, though the OV of this filler was only 14.6%. When the filler was dried to approximately 10% OV, it ran without problems. This may indicate that the DAP acts as a humectant, softening the pectin film by increasing the film's water content.

Processing of filler for the aftercut application/tracking test and the large scale casing system evaluation has been postponed by Semiworks until early August.

Installation of the overhead transport belt system has been completed and the performance of the system is being evaluated. Two suction tape widths are being tested--a narrow one which relies upon metal guide rails to constrain the rod, and a wide one which "cups" the rod, reducing the possibility of binder or filler buildup on stationary parts. Preliminary measurements made at a maker speed of 1000 cpm using the narrow belt indicate that the temperature of the bound rod is being reduced from approximately 190°F to under 100°F in less than two feet of travel down the belt.

C. **Plans**: Evaluate the performance of the overhead transport belt with both narrow and wide suction tapes. Produce low density cigarette samples for evaluation of possible casing systems and for testing of aftercut application techniques.

2001118166

Source: https://www.industrydocuments.ucsf.edu/docs/tygm0000